REMARKS

Applicant is in receipt of the Office Action mailed August 10, 2006. New claim 21 has been added. Thus, claims 1-21 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Section 101 Rejections

Claims 1-20 were rejected under 35 U.S.C. 101 for not producing "a real life, real world, useful, concrete, and tangible result". Applicant respectfully disagrees. Applicant understands that an invention must be operable to produce a "useful, concrete, and tangible result", and respectfully submits that the claims as currently written meet these criteria.

Claim 1 recites:

1. A memory medium that stores program instructions implementing an application programming interface (API) for synchronizing multiple devices in a system, wherein the API comprises:

a plurality of functions invocable in a program to synchronize a plurality of devices, wherein each function is executable to perform a respective functionality related to synchronizing the plurality of devices, and wherein at least one of the plurality of functions is executable to access a plurality of instrument drivers corresponding respectively to the plurality of devices to synchronize the plurality of devices;

wherein, in synchronizing the plurality of devices, the plurality of functions are executable to:

determine a trigger clock signal for each of the plurality of devices; and

synchronize the plurality of devices based on the determined trigger clock signals.

Applicant respectfully submits that synchronizing a plurality of devices in a system has clear practical use and effect, such as, for example, in industrial systems directed to measurement, automation, and control, among others. As the Examiner is certainly aware, device synchronization is often not only beneficial in such systems, but is often necessary for successful operation of the systems. The present invention, being directed to improved means for performing such multi-device synchronization, specifically, an application programming interface (API) for performing such synchronization, is thus useful, and is clearly operable to produce a "useful, concrete, and tangible result", specifically, the synchronization of a plurality of devices in a system.

Moreover, Applicant has added a new independent method claim that particularly recites the performance of such multi-device synchronization via the API.

Applicant thus respectfully submits that the section 101 rejection of claims 1-20 is improper, and respectfully requests its removal.

Section 102 Rejections

Claim 1 was rejected under 35 U.S.C. 102(e) as being anticipated by Conway et al. (USPUB 2004/0064750, "Conway"). Applicant respectfully disagrees.

As the Examiner is certainly aware, anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

In asserting that Conway discloses the claimed application programming interface (API), the Office Action cites paragraphs [0007] – [0008] of Conway, which read thusly:

> [0007] The instrumentation hardware may be configured and controlled by software executing on the computer system. The software for configuring and controlling the instrumentation system typically includes driver software and the instrumentation application software, or the application. The driver software serves to interface the instrumentation hardware to the application and is typically supplied by the manufacturer of the instrumentation hardware or by a third party software vendor. The application is typically developed by the user of the instrumentation system and is tailored to the particular function that the user intends the instrumentation system to perform. The instrumentation hardware manufacturer or third party software vendor sometimes supplies

> application software for applications that are common, generic, or straightforward.
>
> [0008] Instrumentation driver software provides a high-level interface to the operations of the instrumentation device. The instrumentation driver software may operate to configure the instrumentation device for communication with the host system and to initialize hardware and software to a known state. The instrumentation driver software may also maintain a soft copy of the state of the instrument and initiated operations. Further, the instrumentation driver software communicates over the bus to move the device from state to state and to respond to device requests.

As the above paragraphs make clear, in prior art approaches to device synchronization, application programs, e.g., written by the user, make calls to respective instrumentation drivers to interact with the respective devices, e.g., to coordinate synchronization among devices. Note that the application program must make individual calls to each respective instrument driver to interact with the respective device, and so to synchronize multiple devices, the application must make corresponding multiple (direct) calls to the respective instrument drivers of the devices. Thus, there are two software layers involved in synchronization of the devices—the application layer, and the driver layer.

In direct contrast, one embodiment of the present application describes an API (comprising a plurality of functions) as an intermediate software layer interposed between the application layer and the driver layer, where, as claimed, the program (application) makes calls to the functions of the API, and these functions access the drivers. Moreover, as recited in the claim, at least one of the functions "is executable to access a plurality of instrument drivers corresponding respectively to the plurality of devices to synchronize the plurality of devices". In other words, rather than having to access each instrument driver individually via a respective function call as per the prior art, all of the instrument drivers of the plurality of devices are accessible via a single function call (the at least one of the functions) to synchronize the devices. Thus, the addition of this intervening layer (i.e., the present API) significantly simplifies synchronization of multiple devices.

Nowhere does Conway, in the cited paragraphs or elsewhere, teach or suggest such an API, nor, more specifically, such an API function that is executable to access multiple instrument drivers to synchronize the plurality of devices. In fact, Conway fails to even mention an API at all.

Thus, for at least the reasons provided above, Applicant submits that Conway fails to teach or suggest all the features and limitations of claim 1, and so claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over Conway, and are thus allowable.

Removal of the section 102 rejection of claim 1 is respectfully requested.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-82100/JCH.

Respectfully submitted,

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